Peng-Ting (Dean) Kuo

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Work Experience

Academia Sinica / *Research Assistant*   *Mar 2022 - Present*
- Analyzed international organization datasets using statistical techniques, Python (Numpy, Pandas, Matplotlib), and R to provide actionable insights within one month and published on the ABS conference 2023
- Constructed and maintained an events database on UK-Germany relations, consolidating a comprehensive resource and literature reviews for the book project and regularly reporting progress to the team

First Bank / *Operation Planning & Admin. Division Intern*   *Jul 2020 - Aug 2020*
- Conducted qualitative data collection and developed strategic recommendations to enhance digital bank user experience, earning recognition from management
- Initiated and organized an experience-sharing session on project management for 50+ interns, fostering strong relationships between the interns and the company

Publication

From Human-Label to Auto-Label: An Automatic Classification Model for Legislators' Oral Question, ICPS. *2024*

Decoding Campaigning Strategies: A Machine Learning Approach to Understanding the Impact of Election Systems on Legislative Candidates, MPSA. *2024*

Democracy or Prosperity? A Cross-National Analysis of East Asian Countries, ABS. *2023*

Projects

Legislator Manifesto Classification   *Feb 2023 - Present*
Classified Taiwan Manifestos to clarify the relationship between the electoral system and candidates' strategies

- Analyzed Taiwan Manifestos using rigorous NLP techniques and BERTopic, LDA models to uncover the connection between the electoral systems and candidates' strategies. Applied LLMs like OpenAI, Claude, and Gemini for prompt engineering. The code is available on my GitHub
- **Technical skills:** Python (BERTopic, Pandas, OpenAI), Git

Legislator interpellation Classification   *Nov 2023 - Dec 2023*
Provided a pre-trained model for legislators' questioning classification tasks.

- Demonstrate a multi-label classification model for Taiwan legislator interpellation. Applied the Longformer architecture, the model reaches up to 0.84 on Hamming score. The demo is hosted on my HuggingFace Spaces, and the code is available on my GitHub
- **Technical skills:** Python (PyTorch, HuggingFace), LaTeX

Automatic Sports Center Court Reservation   *Feb 2023 - Feb 2023*
Aimed at solving the problem of court sparsity

- Created and implemented a Python script to automate court reservations for the badminton team, optimizing rental efficiency by 60% compared to manual methods, the code is available on my Gist
- **Technical skills:** Python (selenium)

Education

National Taiwan University   *Sep 2021 - June 2024*
MA in Political Science 4.15 / 4.3
- **Master's Thesis:** The Impact of Electoral Reform on Legislators' Campaign Strategies: An Application of Large Language Models
- **Award:** Diplomatic Scholarship (2022)
- **Institute for Political Methodology:** Received intensive training in experimental and quantitative methods, including but not limited to causal inference and survey experiment
- **Related courses:** Probability and Statistics, Linear Algebra and Its Applications, Applied Deep Learning, Programming for Business Computing, Natural Language Processing and Its Applications, Data Science and Social Inquiry, Computational Social Science
- **Teaching Assistant Courses:** Seminar on Games Theory, Social Network and Group Behavior, Computational Social Science

National Taiwan University   *Sep 2017 - June 2021*
Bachelor in Political Science and minor in Economics 3.64 / 4.3
- **Award:** Dean's List Award (second place): 2020 Fall
- **Captain of Department Badminton Team:** Led and mentored 35+ members of the department badminton team with 6 partners to a second-place finish in a national competition, demonstrating decisive leadership and exceptional cooperation

Languages

Mandarin   Native proficiency
English   TOEFL 101/120 (R:24 L:27 S:23 W:27); GRE 330/340
Japanese   Normal proficiency